REVISED GENERAL MATHEMATICS BLUEPRINT

CALIFORNIA CONTENT STANDARDS: ALGEBRA I	Proposed CST Blueprint	%
Symbolic reasoning and calculations with symbols are central in algebra. Through the study of algebra, a student develops an understanding of the symbolic language of mathematics and the sciences. In addition, algebraic skills and concepts are developed and used in a wide variety of problem-solving situations.		
Algebra I	**65**	**100%**
Standard Set 1.0 Students identify and use the arithmetic properties of subsets of integers and rational, irrational, and real numbers, including closure properties for the four basic arithmetic operations where applicable:		
1.1 Students use properties of numbers to demonstrate whether assertions are true or false.	2	
2.0* Students understand and use such operations as taking the opposite, finding the reciprocal, taking a root, and raising to a fractional power. They understand and use the rules of exponents.	8	
4.0* Students simplify expressions prior to solving linear equations and inequalities in one variable, such as $3(2x-5) + 4(x-2) = 12$.	8	
5.0* Students solve multistep problems, including word problems, involving linear equations and linear inequalities in one variable and provide justification for each step.	8	
6.0* Students graph a linear equation and compute the x- and y- intercepts (e.g., graph $2x + 6y = 4$). They are also able to sketch the region defined by linear inequality (e.g., they sketch the region defined by $2x + 6y < 4$).	8	
7.0* Students verify that a point lies on a line, given an equation of the line. Students are able to derive linear equations using the point-slope formula.	6	
8.0 Students understand the concepts of parallel lines and perpendicular lines and how those slopes are related. Students are able to find the equation of a line perpendicular to a given line that passes through a given point.	2	
10.0* Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.	8	
13.0* Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.	6	
15.0* Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.	2	
16.0 Students understand the concepts of a relation and a function, determine whether a given relation defines a function, and give pertinent information about given relations and functions.	1	
17.0 Students determine the domain of independent variables and the range of dependent variables defined by a graph, a set of ordered pairs, or a symbolic expression.	1	
18.0 Students determine whether a relation defined by a graph, a set of ordered pairs, or a symbolic expression is a function and justify the conclusion.	1	
Standard Set 24.0 Students use and know simple aspects of a logical argument:		
24.2 Students identify the hypothesis and conclusion in logical deduction.	2	
Standard Set 25.0 Students use properties of the number system to judge the validity of results, to justify each step of a procedure, and to prove or disprove statements:		
25.2 Students judge the validity of an argument according to whether the properties of the real number system and the order of operations have been applied correctly at each step.	2	
TOTAL	**65**	**100%**